May 2022



# **Global Futures:** Now



"You can cut all the flowers, but you cannot keep spring from coming." *Pablo Neruda* 

It seems there is always a "season" upon us. Some are good, some are less so. Graduation season. Tax season. Fire season. Monsoon season. Sometimes seasons shift, oftentimes they overlap. But it can always be the season for positive change.

We, human beings, are changing our Earth systems, and not necessarily for the better. The April report from the Intergovernmental Panel on Climate Change, "Mitigation of Climate Change," indicates it will be almost impossible to limit warming to 1.5 degrees celsius (2.7 degrees Fahrenheit), and it will take great acceleration in the reduction of fossil fuel use and carbon capture technology to achieve limiting the increase to the upper limit of 2 degrees celsius (3.6 degrees Fahrenheit) outlined by the Paris Climate Agreement. And how we contribute to these negative outcomes is far from equal: across the world, 34-45% of global consumption-based household greenhouse gas emissions can be attributed to just 10% of households (predominantly based in the Northern Hemisphere). Allowing for a future of opportunity, rather than sacrifice, is on borrowed time.

And yet, I can see reasons for something that resembles hope. I maintain the conviction that humans have the capacity to do great things. We created a COVID-19 vaccine in record time. The cost for onshore wind and solar energy has been lowered dramatically to a point where it is cheaper than that produced by burning fossil fuel. The IPCC report highlighted that some places have had success with policies that enhance energy efficiency and reduce rates of deforestation. The scientists behind the report also found that digital technologies, including sensors and AI, can improve energy management and promote low-emission tech. Here at ASU, Carbon Collect and the Global Futures Laboratory have "planted" the first MechanicalTree<sup>TM</sup>, a passive carbon capture systemtechnology that is absolutely necessary as we seek to reduce the atmospheric carbon dioxide concentration. We are training and graduating students in a college like no otherone that is dedicated to sustainability, complexity and innovation. The faculty and leadership are dedicated to preparing students for the greatest challenges of our time. Our commitment to a thriving future for all was recognized last month when the university maintained its No. 1 spot nationally and moved up seven spots to No. 2 globally in the Times Higher Education Impact Rankings (see more about this below).

Change isn't necessarily bad nor good. Humans can make different choices than in the past that will keep the functions of our planet's life-supporting systems intact without sacrifice. One can argue that if we don't, we will move toward the ultimate sacrifice: self-regulation by the planet. Such a scenario would lead to major reorganizations of the Earth system and immense impact on humankind with suffering at scales not seen before. It is up to us to make the changes necessary to move toward a positive pathway by tapping into our knowledge, ingenuity and community–it is up to us to create a season for positive change.

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Peter Schlosser Vice President and Vice Provost of Global Futures

## News



## ASU elevated to No. 2 globally in Times Higher Education Impact Ranking

"At ASU, we are focused on shaping futures in which life can thrive on a healthy planet. We are dedicated to supporting life on Earth's physical, biogeochemical and societal systems, and we are honored to see this work reflected in the Times Higher Education Impact ranking," said Peter Schlosser, vice president and vice provost of Global Futures at ASU. The annual international publication of university rankings looks at impacts made addressing the 17 United Nations Sustainable Development Goals aimed at achieving a better world by 2030. ASU ranked No. 1 in the world in three categories: sustainable cities and communities; life below water; and life on land.

#### Learn more



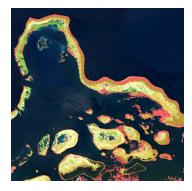
#### ASU-based center convenes state universities with major utilities to develop carbon-neutral energy solutions

Center for an Arizona Carbon-Neutral Economy establishes a new, interdisciplinary coalition among four Arizona energy providers and the state's three public universities. The center will play a crucial leadership role in helping Arizona explore options and strategic pathways that move the state toward a carbon-neutral and thriving economy. Among its first undertakings will be the creation of a regional clean hydrogen hub.



#### Landmark corals study depicts marine heat wave winners and losers based on environment

A new study from the <u>Center for Global Discovery and</u> <u>Conservation Science</u>, published in PNAS, found that corals resilience to marine heat waves is highly variable thanks to high-resolution monitoring. The advanced monitoring, exhibited in the center's Global Airborne Observatory, A combination of human and environmental factors, including reduced coastal development and lower sedimentation levels, advantaged the majority of refugia over neighboring reefs.







## Understanding the relationships between flooding, green infrastructure and equity in 3 U.S. cities

Analysis completed by ASU's Nancy Grimm and Jason Sauer, conducted in partnership with researchers from Portland State and published in Elsevier, looked at green infrastructure, pluvial flooding and how that translated to different neighborhood demographics in Phoenix, Portland and Atlanta.



## Center for Science and the Imagination receives \$10 million grant to reimagine STEM in Arizona

Project ASAP (Arizona STEM Acceleration Project), guided by Ruth Wylie, will look at Arizona's STEM education ecosystem and prepare teachers to deliver high-quality, hands-on STEM activities by providing professional development opportunities, as well as the time and materials needed to update classroom curriculum. The grant is part of the Arizona Department of Education's distribution of American Rescue Plan funds.



#### Learn more

## Narrative Storytelling Initiative to publish new book series with Temple University Press

The series, Transformations Books, will explore issues of



justice, equity, diversity and inclusion, drawing on the lived experiences of authors and grounded in specific locations domestically and globally.

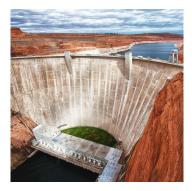
Read more

#### Timi Aganaba co-authors Science editorial considering future of Africa's burgeoning space activities

Written with Ettim Offiong of the African Regional Center for Space Science and Technology Education, their article explores the growing programs and impacts of the African Space Policy and Strategy and what that means for African nations and their populations.

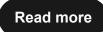


#### Read more



## Dave White speaks with Popular Science about Lake Powell, drought and what that means for hydroelectric power

"Our historic strategies for managing (energy demand) predominantly through infrastructure like dams and reservoirs and delivery systems are now sort of inadequate to the challenges that we face."



## **Recent Events**



## Earth Week

If you were unable to join any of the sessions or would like to go back and rewatch, each of the day's <u>livestream</u> <u>sessions</u> as well as the <u>dedication for the</u> <u>Rob and Melani Walton Center for Planetary</u> <u>Health</u> are now embedded on the <u>Earth</u> <u>Week</u> page.



#### Convocation

Congratulations to all of the College of Global Futures graduates who recevied confirmation of their degrees at Gammage Auditorium on May 10. You can read profiles of some of our outstanding graduates such as <u>Fatima Hafsa</u>, <u>Zane Encinas</u>, <u>Emily</u> <u>Harding</u>, <u>Daniel Kinzer</u>, <u>Nicole Mayberry</u>, <u>William Walker IV</u> and <u>Zuzana Skvarkova</u>. We look forward to following how these and all of our new graduates create their pathways forward.







#### Don't miss any future news

Be sure to receive this newsletter as well as other journals and updates including our biannual journal, Futurecast.



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